

PACKAGE ID - 001291MLTPL00 PEGASUS

KWIC TITLE - 3D Direct Simulation Monte Carlo Code Which
Solves for Geometrics

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LIMITATION CODE -COPY **AUDIENCE CODE** - LIM

COMPLETION DATE - 12/01/1998 **PUBLICATION DATE** - 12/01/1998

DESCRIPTION - Pegasus is a 3D Direct Simulation Monte Carlo Code which solves for geometries which can be represented by bodies of revolution. Included are all the surface chemistry enhancements in the 2D code Icarus as well as a real vacuum pump model. The code includes multiple species transport.

PACKAGE CONTENTS - Media Directory; Software Abstract; Media Includes Source Code, User's Guide, Sample Problem Input and Output Data;

SOURCE CODE INCLUDED? - Yes

MEDIA QUANTITY - 1 CD Rom

METHOD OF SOLUTION - Direct Simulation Monte Carlo algorithm

COMPUTER - MLT-PLTFM

OPERATING SYSTEMS - Unix, Absoft, nCUBE, Intel Paragon.

PROGRAMMING LANGUAGES - na

SOURCE CODE AVAILABLE (Y/N) - Y

RELATED SOFTWARE - Grid generation, decomposition, and post processing software: init3d, decomp3d, post 3d, restart3d. Graphics support is provided by Tecplot, available from Amtec Engr.

HARDWARE REQS - Cpu memory dictates the size of problem which can be run. The algorithm takes advantage of multiple processors by a domain decomposition strategy.

ABSTRACT STATUS - Released AS-IS 3/2/1999

SUBJECT CLASS CODE - H

KEYWORDS -
COMPUTER PROGRAM DOCUMENTATION
P CODES
THERMAL CONDUCTION
BOUNDARY CONDITIONS
HEAT TRANSFER

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SOFTWARE ABSTRACT

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MATERIALS
CONVECTION
THERMAL RADIATION
TEMPERATURE DEPENDENCE
FINITE DIFFERENCE METHOD
MONTE CARLO METHOD

EDB SUBJECT CATEGORIES -
990200 420400

SPONSOR - DOE/DP

PACKAGE TYPE - AS - IS